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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,274	09/01/2000	Yoshinori Miyajima	32930	5858

116 7590 07/07/2005

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EXAMINER

APPIAH, CHARLES NANA

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/654,274

Applicant(s)

MIYAJIMA ET AL.

Examiner

Charles N. Appiah

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-22 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,7-22 and 24-28 is/are allowed.
- 6) ☒ Claim(s) 3-6 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 3, 4, 5/3, 5/4, 6/6, 29, 30, 31/29 and 31/30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecan (6,603,825) in view of Shi (6,507,740).

Regarding claims 3, 4, 29 and 30 Pecan discloses a radio for receiving a signal having a signal format that is transmitted while changing transmission conditions into two types or more, comprising: a gain controlling means for controlling a gain of the receiver (see col. 3, lines 34-47), an electric field intensity detecting means for detecting an electric field intensity of a received signal (see col. 3, line 63 to col. 4, line 5), a first controlling means for causing the gain controlling means when the electric field intensity detected by the electric field intensity detecting means reaches the threshold of the electric field intensity level (see col. 4, lines 12-37). Pecan fails to explicitly teach a threshold setting means for automatically setting a threshold of an electric field intensity level based on the transmission condition of the received signal, wherein the threshold level is varied depending on the transmission condition.

In an analogous filed of endeavor, Shi discloses a method for adapting the handoff threshold in a mobile communication system wherein the dynamic threshold is adapted in accordance with the link quality or signal strength of the present communication channel (see col. 3, lines 16-65, col. 4, lines 38-62 and col. 5, lines 4-30), with the link or signal quality of the present communication constituting a "transmission condition".

It would therefore have been obvious to one of ordinary skill in the art to incorporate Shi's threshold adjustment based on signal quality capability into Pecan's automatic gain control system in order to ensure reduced signaling and information processing for maintaining required quality communications.

Regarding claims 5/3, 5/4, 6/3 and 6/4, Pecan further discloses wherein the gain controlling means is a step-wise gain control type which changes the gain by a predetermined amount when a signal level of the received signal exceeds a predetermined level (see col. 4, lines 12-49), and the gain control means is a continuous gain control type which changes the gain in response to a signal level of the received signal (col. 7, lines 7-44).

Regarding claim 29/31 and 30/31 Pecan's teaching of the use processors, or controllers implemented using a DSP, a microprocessor, a micro controller, a PLU, logic circuitry or a combination thereof (see col. 3, lines 23-34), meets the computer-readable recording medium for storing a program which causes a computer to execute a radio receiving method.

Allowable Subject Matter

3. Claims 1, 1/5, 1/6, 7-22, 24-28, 31/17, 31/18, 31/19, 31/24 and 31/25 are allowed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Akazawa et al. (5,168,505) discloses an automatic gain control system for a spread spectrum communication device.

Dohi et al. (6,341,224) discloses a system for dynamically changing a SIR threshold based on an error rate measurement.

Iwata et al. (6,597,898) discloses an automatic gain control method for a mobile communication device.

Response to Arguments

5. Applicant's arguments with respect to claims 3-4, 5/3, 5/4, 6, 29, 30, 31/29 and 31/30 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Appiah whose telephone number is 571 272-7904. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHARLES APPIAH
PRIMARY EXAMINER